

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method for manufacturing a honeycomb structure comprising a step of processing a peripheral portion of a crude honeycomb structure to obtain a honeycomb structure with a predetermined shape,

wherein the step of processing a peripheral portion of a crude honeycomb structure is made by a cutter having linear cut-off device, the cutter is a bead saw.

2. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 1, wherein the cutter is a linear cutter as the linear cutting device comprising a linear body and any of diamond abrasive grain, general grind stone and multi-blade cutter disposed on the linear body.

3. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 1, wherein the method comprises steps of:

forming honeycomb segments having cells disposed parallel to a central axis of the honeycomb segment, each cell being surrounded by porous partition walls functioning as filters, and each cell functioning as a fluid passage;

combining the honeycomb segments to form the crude honeycomb structure;
and

processing the crude honeycomb structure by the bead saw to obtain a honeycomb structure with a predetermined shape.

4. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 1, wherein the method comprising steps of:

forming honeycomb segments having cells disposed parallel to a central axis of the honeycomb segment, each cell being surrounded by porous partition walls functioning as filters, and each cell functioning as a fluid passage;

combining the honeycomb segments to form the crude honeycomb structure;

roughly processing the crude honeycomb structure by the bead saw to obtain a roughly processed honeycomb structure with a predetermined shape; and

finishing the roughly processed honeycomb structure to obtain the honeycomb structure with a predetermined shape.

5. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 2, wherein the step of processing the peripheral portion of the crude honeycomb structure is made by rotating the crude honeycomb structure about a central axis thereof, causing the linear cutter of the bead saw to travel in a direction of the central axis, and pressing the linear cutter against the crude honeycomb structure from a side face thereof.

6. (Original) The method for manufacturing a honeycomb structure according to claim 5, wherein the step of processing the peripheral portion of the crude honeycomb structure is made by one continuous operation after the linear cutter is pressed against the crude honeycomb structure from the side face thereof.

7. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 2, wherein the peripheral portion of the crude honeycomb structure is processed such that a sectional shape of the crude honeycomb structure is formed in a round shape, an oval shape, an elliptical shape, a triangular shape, a polygonal shape, or an irregular shape when it is cut off along a plane perpendicular to the central axis thereof.

8. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 2, wherein the method comprising steps of:

forming honeycomb segments having cells disposed parallel to a central axis of the honeycomb segment, each cell being surrounded by porous partition walls functioning as filters, and each cell functioning as a fluid passage;

combining the honeycomb segments to form the crude honeycomb structure;

and

processing the crude honeycomb structure by the bead saw to obtain a honeycomb structure with a predetermined shape.

9. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 2, wherein the method comprising steps of:

forming honeycomb segments having cells disposed parallel to a central axis of the honeycomb segment, each cell being surrounded by porous partition walls functioning as filters, and each cell functioning as a fluid passage;

combining the honeycomb segments to form the crude honeycomb structure;

roughly processing the crude honeycomb structure by the bead saw to obtain a roughly processed honeycomb structure with a predetermined shape; and

finishing the roughly processed honeycomb structure to obtain the honeycomb structure with a predetermined shape.

10. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 3, wherein the step of processing the peripheral portion of the crude honeycomb structure is made by rotating the crude honeycomb structure about a central axis thereof, causing the linear cutter of the bead saw to travel in a direction of the central axis, and pressing the linear cutter against the crude honeycomb structure from a side face thereof.

11. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 4, wherein the step of processing the peripheral portion of the crude honeycomb structure is made by rotating the crude honeycomb structure about a central axis

thereof, causing the linear cutter of the bead saw to travel in a direction of the central axis, and pressing the linear cutter against the crude honeycomb structure from a side face thereof.

12. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 2, wherein the peripheral portion of the crude honeycomb structure is processed such that a sectional shape of the crude honeycomb structure is formed in a round shape, an oval shape, an elliptical shape, a triangular shape, a polygonal shape, or an irregular shape when it is cut off along a plane perpendicular to the central axis thereof.

13. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 3, wherein the peripheral portion of the crude honeycomb structure is processed such that a sectional shape of the crude honeycomb structure is formed in a round shape, an oval shape, an elliptical shape, a triangular shape, a polygonal shape, or an irregular shape when it is cut off along a plane perpendicular to the central axis thereof.

14. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 4, wherein the peripheral portion of the crude honeycomb structure is processed such that a sectional shape of the crude honeycomb structure is formed in a round shape, an oval shape, an elliptical shape, a triangular shape, a polygonal shape, or an irregular shape when it is cut off along a plane perpendicular to the central axis thereof.

15. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 5, wherein the peripheral portion of the crude honeycomb structure is processed such that a sectional shape of the crude honeycomb structure is formed in a round shape, an oval shape, an elliptical shape, a triangular shape, a polygonal shape, or an irregular shape when it is cut off along a plane perpendicular to the central axis thereof.

16. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 6, wherein the peripheral portion of the crude honeycomb structure is processed such that a sectional shape of the crude honeycomb structure is formed in a round

shape, an oval shape, an elliptical shape, a triangular shape, a polygonal shape, or an irregular shape when it is cut off along a plane perpendicular to the central axis thereof.

17. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 1, wherein the cut-off device rotates about an axis of the cut-off device in addition to moving in a linear direction.

18. (Canceled)

19. (Previously Presented) The method for manufacturing a honeycomb structure according to claim 1, wherein the predetermined shape is a non-round shape.

20. (New) The method of manufacturing a honeycomb structure according to claim 1, wherein the bead saw comprises an endless wire and a plurality of bead-shaped members made of metal bond material, the bead-shaped members being fixed on the endless wire at a predetermined pitch.

21. (New) The method for manufacturing a honeycomb structure according to claim 20, wherein:

the endless wire is made of steel and has a diameter between about 4 and 5 mm;

the bead-shaped members each has a diameter between about 8 and 10 mm and a length of about 6 mm; and

the pitch is about 25 mm.